# U.S. Department of the Interior • U.S. Geological Survey

# MINERAL INDUSTRY SURVEYS

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## MANGANESE IN MAY 1997

In May, reported consumption of manganese ore containing 35% or more manganese, exclusive of that at iron and steel plants, was 36,400 metric tons, which was a decrease of more than 4% compared with that of the previous month, according to the U.S. Geological Survey. This brought the revised year to date total to 191,000 tons. These figures increase to 41,500 and 214,000 when estimates for annual respondents are added on the basis of 1996 data. Corresponding industry stocks of ore at the end of the month were estimated as 298,000 tons, which includes an estimate for annual respondents based on 1996 data. This was a decrease of more than 8% in comparison with the corresponding figure for stocks at the end of April. (Data for the most recent 13 months are graphed on page 2.)

The next report of data on domestic consumption and stocks of manganese ferroalloys and metals will pertain to the January through March quarter of 1997.

Foreign trade data for May will appear in a subsequent report. The data for April tabulated in this report indicated relatively small imports of ore and relatively large exports of metal and silicomanganese. Unusually large exports of metal were the greatest since at least January 1983. Ore imports were the least since February 1996 and silicomanganese exports the greatest since February 1996. **Note:** For early availability, the April trade data appearing in this report were placed on FaxBack in preliminary form as of June 23. The FaxBack document number for these preliminary tables was 420204.

The Defense Logistics Agency (DLA), U.S. Department of Defense, reported for May two cash disposals from the National Defense Stockpile under DLA-ORES-071. These consisted of 2,182 tons of metallurgical-grade ore to American Minerals Inc., King of Prussia, PA, and 41 tons of natural battery-grade ore to The Prince Manufacturing Co., Quincy, IL. On May 1, DLA issued Solicitation of Offers DLA-ELECTROLYTIC MANGANESE METAL-001, which offered for sale 1,053 tons of electrolytic metal. This offering included a preference to domestic ferroalloy upgraders and superseded a prior offering under DLA-MET-101 that had been canceled November 27, 1996. The contact at DLA for the offering was Rick Talbott, phone number (703) 767-5479. Later action: On June 20, DLA issued Solicitation Offers DLA-FERROMANGANESE-002, which offered for sale 4,536 tons of medium-carbon ferromanganese. In so doing, DLA noted that this offering contained no restrictions and concurrently issued an amendment to DLA-FERROMANGANESE-001 that deleted medium-carbon ferromanganese from it. The mediumcarbon ferromanganese being made available under DLA-FERROMANGANESE-002 was any of the entire inventory of 17,674 tons. This material had been produced by Union Carbide Corp. in 1968-1970. The contact at DLA for this offering was Jennifer Iribarren, telephone number (703) 767-

 $\label{eq:table 1} \textbf{TABLE 1}$  SELECTED U.S. FOREIGN TRADE IN MANGANESE 1/

(Metric tons, manganese content) 2/

	Impo	rts for consumption	Exports			
	Ore and	Ferroalloy			Ferroalloy	
	dioxide	and metal	Total	Ore	and metal	Total
1996:						
April	32,500	61,500	93,900	1,220	1,830	3,050
January-April	63,100	192,000	255,000	3,660	6,710	10,400
1997:						
January	14,900 3/	25,400	40,300	3,450	1,370	4,820
February	21,000 3/	22,300	43,300	2,580	1,060	3,630
March	18,100 3/	41,800 3/	59,900	2,920	1,270	4,190
April	2,700	42,700 3/	45,400	2,110	2,860	4,960
Total	56,700	132,000	189,000	11,100	6,550	17,600

<sup>1/</sup> Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.

 ${\bf TABLE~2} \\ {\bf U.S.~IMPORTS~FOR~CONSUMPTION~OF~SILICOMANGANESE~IN~APRIL~1997~1/}$ 

#### (Metric tons)

					Year to date	
	Gross	Mn	Customs	Gross	Mn	Customs
Source	weight	content	value	weight	content	value
Australia	5,000	3,310	\$2,160,000	21,800	15,200	\$9,340,000
Georgia				2,440	1,710	1,360,000
India	1,930	1,270	832,000	12,300	8,320	5,800,000
Mexico	7,750	5,060	3,680,000	14,600	9,490	6,910,000
Norway				277	169	267,000
Russia	2,480	1,820	1,920,000	2,480	1,820	1,920,000
South Africa	8,660	5,830	4,030,000	26,600	17,900	12,400,000
Spain				1,200	750	1,020,000
Venezuela				7,000	4,580	3,060,000
Total	25,800	17,300	12,600,000	88,700	60,000	42,000,000
Total, general imports	25,800	17,300	12,600,000	86,200	58,200	40,700,000

<sup>1/</sup> Data are rounded to three significant digits; may not add to totals shown.

<sup>2/</sup> As reported except as estimated for imports of manganese dioxide and manganese waste and scrap and for exports from gross weights.

<sup>3/</sup> All or part of these data have been referred to the Bureau of the Census for verification.

 ${\bf TABLE~3} \\ {\bf U.S.~IMPORTS~FOR~CONSUMPTION~OF~FERROMANGANESE~IN~APRIL~1997~1/}$ 

#### (Metric tons)

	·			·	Year to date	
	Gross	Mn	Customs	Gross	Mn	Customs
Source	weight	content	value	weight	content	value
Low carbon:				_		
Italy	489	425	\$635,000	1,160	1,030	\$1,670,000
Japan	65	55	91,400	1,570	1,260	1,410,000
Norway				175	26	130,000
South Africa	120	109	231,000	660	609	1,170,000
Total, low carbon	674	589	957,000	3,560	2,930	4,380,000
Total, general imports						
of low carbon	674	589	957,000	3,600	2,960	4,400,000
Medium carbon, 1%-2% C:	-					
Brazil	170	136	134,000	1,830	1,480	1,300,000
China				2,070	1,670	1,630,000
Japan				2,500	2,010	1,950,000
Mexico	5,290	4,260	3,780,000	13,600	10,900	9,710,000
Norway				469	295	331,000
South Africa				120	94	112,000
Total, m.c., 1%-2% C	5,460	4,390	3,910,000	20,500	16,400	15,000,000
Total, general imports						
of m.c., 1%-2% C	5,460	4,390	3,910,000	20,500	16,400	15,000,000
Medium carbon, 2%-4% C:						
Canada				101	40	13,400
Total, m.c., 2%-4% C				101	40	13,400
Total, general imports						
of medium carbon				101	40	13,400
High carbon:						
Australia	4,000	3,040	1,490,000	15,500	11,400	5,140,000
Brazil				9,660	7,360	3,640,000
France	11,700	9,190	5,060,000	11,700	9,190	5,060,000
South Africa	9,280	7,280	3,750,000	26,600	20,800	10,900,000
Total, high carbon	25,000	19,500	10,300,000	63,400	48,800	24,800,000
Total, general imports						
of high carbon	25,000	19,500	10,300,000	63,400	48,800	24,800,000
Grand total	31,100	24,500	15,200,000	87,600	68,200	44,200,000
Grand total, general imports	31,100	24,500	15,200,000	87,700	68,200	44,200,000

<sup>1/</sup> Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.

 ${\bf TABLE~4}$  U.S. IMPORTS 1/ OF MANGANESE ORE (20% OR MORE MN) IN APRIL 1997 2/

#### (Metric tons)

	20% - 479	% Mn	47% or mor	re Mn	Total		
Source	Gross	Mn	Gross	Mn	Gross	Mn	
	weight	content	weight	content	weight	content	
Mexico	2,290	851			2,290	851	
Total	2,290	851			2,290	851	
Year to date:							
Australia			5,490	3,210	5,490	3,210	
Belgium			6	5	6	5	
Gabon			73,500	37,600	73,500	37,600	
Mexico	22,100	8,250 3/	801	539	22,900	8,790	
Morocco			18	9	18	9	
Total	22,100	8,250	79,800	41,300	102,000	49,600	

<sup>1/</sup> Quantities for general imports and imports for consumption are identical.

<sup>2/</sup> Data are rounded to three significant digits; may not add to totals shown.

<sup>3/</sup> Includes U.S. Geological Survey's conversion of part of reported data (from apparent MnO2 content to Mn content).

TABLE 5 U.S. IMPORTS FOR CONSUMPTION OF MANGANESE DIOXIDE AND MANGANESE METAL IN APRIL 1997 1/

#### (Metric tons, gross weight)

		Mangane	Manganese metal					
	<del></del>		Year	to date	Ur	nwrought	C	ther
		Customs		Customs				
Source	Quantity	value	Quantity	value	Quantity	Year to date	Quantity	Year to date
Australia	2,260	\$3,190,000	8,280	\$11,600,000				
Belgium	55	91,900	155	263,000				
Brazil			127	177,000				
Canada							(2/)	1
China			335	396,000	120	620		242
France							11	28
Germany	9	55,600	34	177,000	6	3/ 6		2
Ireland	480	672,000	1,990	2,810,000				
Italy							6	6
Japan			14	22,200				
Mexico	91	154,000	91	154,000				2
South Africa	— 191	261,000	778	1,070,000	746	2,850		
Ukraine						240		
United Kingdom	<del></del>		(2/)	4,220				
Total	3,090	4,420,000	11,800	16,700,000	872	3,710	17	281
Total, general imports	3,090	4,420,000	11,900	16,900,000	908	3,830	17	281

<sup>1/</sup> Data are rounded to three significant digits; may not add to totals shown.

Note: Imports for consumption of metallic manganese waste and scrap totaled 9 tons, all of which was from Canada, to give a year to date total of 89 tons.

Source: Bureau of the Census.

 ${\it TABLE~6}$  U.S. EXPORTS OF MANGANESE ORE (20% OR MORE MN), FERROMANGANESE, SILICOMANGANESE, AND MANGANESE METAL BY COUNTRIES OF DESTINATION IN APRIL 1997 1/

(Metric tons, gross weight)

			Ferron	nanganese,					
	Mang	Manganese ore		2% or less C		Silicomanganese		Manganese metal 2/	
	April	Year to date	April	Year to date	April	Year to date	April	Year to date	
Argentina		60							
Australia	47	95							
Belgium	1,310	2,690						325	
Brazil						5		156	
Canada	371	908	724	2,090	577	1,060	194	582	
Colombia								3	
France		656					350	533	
Germany								64	
Hong Kong								6	
Israel	1,220	1,840							
Italy	910	2,200							
Japan							294	579	
Korea, Republic of							34	64	
Mexico	352	352	14	61	8	117	19	41	
Netherlands		9,740		3		11	364	455	
Norway		3,580							
Spain						9			
Sweden							19	39	
Switzerland				16					
Taiwan							2	2	
United Kingdom		6					512	782	
Venezuela				13					
Total	4,210	22,100	739	2,180	585	1,200	1,790	3,630	

<sup>1/</sup> Data are rounded to three significant digits; may not add to totals shown.

Note: Exports of ferromanganese with more than 2% carbon totaled 126 tons, of which 96 tons went to Canada and 31 tons went to Mexico, to give a year to date total of 506 tons.

<sup>2/</sup> Less than 1/2 unit.

<sup>3/</sup> All or part of these data have been referred to the Bureau of the Census for verification.

 $<sup>2\!/</sup>$  Includes manganese-aluminum, some other alloys, and waste and scrap.

TABLE 7
U.S. FOREIGN TRADE IN SELECTED MANGANESE CHEMICALS IN APRIL 1997, BY CLASS 1/

					Year t	to date
	Gross weight	Value 2/	Principal sources and destinations: gross weight (metric tons);	Gross weight	Value 2/	Principal sources and destinations: gross weight (metric tons)
a.	- C			_		0 0 ,
Class	(metric tons)	(thousands)	value (thousands) 2/	(metric tons)	(thousands)	value (thousands) 2/
Imports for consumption:						
Manganese oxides other than dioxide	182	\$232	China 150; \$178	461	\$833	China 150; \$178
Sulfates, basket category,						
including manganese sulfate	4,370	2,660	Mexico 2,320; \$1,120	9,120	5,910	Mexico 6,170; \$3,270
Potassium permanganate	134	257	Germany 60; \$108	530	1,030	Czech Republic 216; \$419
Manganites, manganates, and						
other permanganates	(3/)	5	Canada (3/); \$5	6	33	Germany 5; \$21
Exports:						
Manganese dioxide	281	193	Canada 237; \$95	1,220	1,120	Canada 761; \$303
Manganese oxides other than dioxide	527	532	United Kingdom 174; \$239	2,730	2,570	Canada 1,440; \$660
Sulfates, basket category,						
including manganese sulfate	2,260	940	Canada 1,910; \$542	8,020	4,490	Canada 6,430; \$2,120
Potassium permanganate	22	45	Germany 16; \$32	145	311	Canada 52; \$103
Manganites, manganates, and						
other permanganates	8	64	United Kingdom 8; \$56	69	671	Germany 36; \$254
/ Data are rounded to three significant digits						

<sup>1/</sup> Data are rounded to three significant digits.

<sup>2/</sup> For imports, Customs value; for exports, f.a.s. value.

<sup>3/</sup> Less than 1/2 unit.